

**Abstract**

A method and system may be used to design and control the manufacture of a surgical guide for implanting a prosthetic component. The system includes a bone surface image generator, a surgical guide image generator, and a surgical guide image converter. The bone surface image generator receives three dimensional bone anatomical data for a patient's bone and generates a bone surface image. The surgical guide image generator generates a surgical guide image from the bone surface image and an image of a prosthesis imposed on the bone surface image. The supporting structure of the generated surgical guide image conforms to the surface features of the three dimensional bone surface image. The surgical guide image is converted by surgical guide image converter into control data for operating a machine to form a surgical guide that corresponds to the surgical guide image.